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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
|-----------------|-------------|----------------------|---------------------|
| 08/318,878 | 03/28/97 | ARMSTRONG | |

0821/0314
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ELEY, T EXAMINER

ART UNIT PAPER NUMBER
3/23 4

03/14/00
DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks



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03/918,078 00/25/97 ARMSTRONG

J

QM21/0217

EXAMINER

ELEY, T

ART UNIT

PAPER NUMBER

3723

4

DATE MAILED:

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
08/918,078

Applicant(s)
J. Armstrong

Examiner
Timothy V. Eley

Group Art Unit
3723



☒ Responsive to communication(s) filed on Dec 7, 1998

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 6-24 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 6-24 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 7-11, and 20-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. In claims 7 and 10, applicant recites that the steps of directing and impacting are performed concurrently with the operation of a processing device. This recitation is vague and indefinite, since it is not readily apparent as to exactly how the processing device cooperates with the abrasive surface.

b. In claim 20, applicant recites that step of impacting the abrasive surface with the dry ice particles so as to remove material generated during an operation procedure. This recitation is vague and indefinite, since it is not readily apparent as to whether or not the abrasive surface performs the operational procedure.

c. "said so . . . surface"(claim 9, lines 2 and 3), and "that . . . apparatus"(claim 20, lines 2 and 3) is vague, indefinite, and awkwardly and confusingly worded.

d. Claims 22 and 24 are vague and indefinite, since it is not readily apparent as to exactly how the steps of directing and impacting can be performed manually. Is the dry ice thrown against the abrasive surface?

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Claim Rejections - 35 USC § 103

2. Claims 6-19,23, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parsons in view of Palmer, Jr.

a. Parsons discloses a process for in-situ cleaning of an abrasive surface by directing a fluid flow towards the abrasive surface, and impacting the abrasive surface with the fluid so as to remove material generated during an operational procedure and being retained in the abrasive surface and so as to not materially effect the abrasive surface.

b. Parsons does not disclose cleaning the abrasive surface by using dry ice particles.

c. Palmer, Jr. discloses that it is well known in the art to use dry ice particles for cleaning a surface by spraying the dry ice against the surface so as to not materially effect the abrasive surface(see column 1, lines 16-20).

d. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method disclosed by Parsons by directing dry ice particles against the abrasive surface for in-situ cleaning thereof as taught to be desirable by Palmer, Jr.

e. In regard to claim 24, to perform the directing and impacting manually would have been obvious to one of ordinary skill in the art at the time of the invention since applicant has not disclosed that such provides any stated advantage over the prior art and since clearly applicants invention would operate just as well using the automatic system of Parsons.

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3. Claims 6,12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kataoka et al in view of Palmer, Jr.

a. Kataoka et al discloses a process for in-situ cleaning of an abrasive surface by directing particles towards the abrasive surface, and impacting the abrasive surface with the particles so as to remove material generated during an operational procedure and being retained in the abrasive surface and so as to not materially effect the abrasive surface.

b. Kataoka et al do not disclose cleaning the abrasive surface by using dry ice particles.

c. Palmer, Jr. discloses that it is well known in the art to use dry ice particles for cleaning a surface by spraying the dry ice against the surface so as to not materially effect the abrasive surface(see column 1, lines 16-20).

d. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method disclosed by Kataoka et al by directing dry ice particles against the abrasive surface for in-situ cleaning thereof as taught to be desirable by Palmer, Jr.

e. In regard to claim 13, to traverse the abrasive surface in numerous directions would have been obvious to one having ordinary skills in the art at the time of the invention since this would clearly result in the entire abrasive surface being cleaned.

4. Claims 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parsons in view of Palmer, Jr. as applied to claims 6-19,23 and 24 above, and further in view of Simpson et al.

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- a. Parsons in view of Palmer, Jr. is explained above.
- b. Parsons as modified above does not disclose removing the abrasive surface from the processing apparatus before cleaning it.
- c. Simpson et al. teach cleaning an abrasive surface by removing the abrasive surface from a processing apparatus and directing abrasive particles towards the surface.
- d. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have further modified the method disclosed by Parsons by removed the abrasive surface from the processing apparatus before cleaning it as taught by Simpson et al to thereby providing easier and better cleaning of the abrasive surface.
- e. In regard to claim 22, to perform the directing and impacting manually would have been obvious to one of ordinary skill in the art at the time of the invention since applicant has not disclosed that such provides any stated advantage over the prior art and since clearly applicants invention would operate just as well using the automatic system of Parsons.

Response to Arguments

5. Applicant's arguments filed December 07, 1998 have been fully considered but they are not persuasive.

- a. Applicant argues that when dry ice impacts and cleans the abrasive surface of a sanding belt, the abrasive properties of the sanding belt are not materially altered.
 - i. Applicant is not claiming a sanding belt.

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ii. Whether are not the properties of the sanding belt are altered would depend upon numerous factors, such as; how the belt is manufactured, the material of the belt, the force and/or size of the dry ice particles, etc . . .

b. Applicant argues that the system and method disclosed in Parsons can easily cause problems with finishing and surface treatment of wood products because the system is solvent or liquid based, and the system and method creates the potential for liquid contamination as well as humidity issues while processing the wood, notwithstanding the alleged use for cleaning sanding belts.

i. Palmer, Jr. discloses that dry ice particles can be used to clean surfaces.

ii. Applicant has not claimed a sanding belts nor the exact type of material being cleaned from the abrasive surface and therefore it is seen that the dry ice particles may be used to effectively clean the abrasive surface disclosed by Parsons.

c. Applicant argues that Kataoka et al teaches that blasting dry abrasive particles as a practical matter either causes damage to the grinding wheel or is in-effective to clean the surface, and therefore teaches away from blasting a surface with dry abrasive particles.

i. However, Palmer, Jr. teaches that it is well known in the art to use dry ice particles for cleaning a surface by spraying the dry ice against the surface so as to not materially effect the abrasive surface(see column 1, lines 16-20) and therefore, this teaching may be applied appropriately in the Kataoka et al method.

d. Applicants argue that nowhere does Palmer, Jr. teach that dry ice particles can be used

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to clean an abrasive surface without materially effecting the operational characteristics of the surface.

i. However, Palmer, Jr. teaches that it is well known in the art to use dry ice particles for cleaning a surface by spraying the dry ice against the surface so as to not materially effect the abrasive surface(see column 1, lines 16-20).

ii. Inherently, dry ice can be used to clean an abrasive surface without materially effecting the operational characteristics of the surface.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

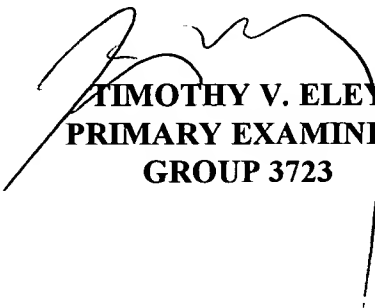
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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7. Documents related to the instant application may be submitted to Technology Center 3720 by facsimile transmission. Applicant is reminded to clearly mark any transmission as "DRAFT" if it is not to be considered as an official response. The Technology Center 3720 Facsimile Center number is (703)305-3579/3580.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy V. Eley whose telephone number is (703)308-1824.

tve
February 11, 1999



TIMOTHY V. ELEY
PRIMARY EXAMINER
GROUP 3723